

**REMARKS**

**INTRODUCTION:**

In accordance with the following, the title and specification have been amended, and new claim 20 has been added. No new matter has been submitted.

Reconsideration of the allowability of the pending claims is respectfully requested.

Claims 1-20 are pending, with claims 18 and 19 having been withdrawn, and with claims 1-17 under consideration.

**OBJECTION TO THE TITLE:**

The Office Action has objected to the title since the term "hologram," or the phrase "pickup having a holographic lens element," is not specifically recited. However, it is noted that the title is representative of the claims of an application, not any particular inventive feature that may be disclosed in the application.

The title has been amended to clearly detail that the present invention includes a converter, after reflection of a light beam off of an optical disk, to optimize the light beam based upon wavelength.

It is respectfully submitted that the amended title is descriptive of the presently claimed invention. Withdrawal of this objection is respectfully requested.

**OBJECTION TO THE DRAWINGS:**

The drawings stand objected to since the Office Action has indicated that they do not clearly illustrate the optical beam spots as being identical.

FIGS. 3A and 3B, especially in view of FIG. 3C, illustrate that the beam spot at the detector can be substantially identical, regardless of the light source. FIG. 3C, for example, illustrates an example of how large a beam spot would be if the holographic lens 117 was not used. For clarity purposes, the specification has been amended to clearly point out this claimed feature, although it was believed that the same was not necessary since the discussion regarding FIGS. 3A-3C clearly references the same.

With the specification specifically referring to FIGS. 3A and 3B as illustrating substantially identical beam spot sizes, it is respectfully submitted that this claimed feature is clearly illustrated in the pending drawings.

Therefore, it is respectfully requested that this objection be withdrawn.

**REJECTION UNDER 35 U.S.C. §103:**

Claims 1, 2, 6, 7, 13, 14 and 16 stand rejected under 35 U.S.C. §103(a) as being obvious over the acknowledged prior art (Prior Art) (either Figure 1 or 2 as submitted) in view of Maeda et al., U.S. Patent No. 5,303,221. Claims 3, 4 and 15 stand rejected under 35 USC §103 as being obvious over Prior Art and Maeda et al. Claims 5 and 8-11 stand rejected under 35 U.S.C. §103(a) as being obvious over the art as applied to claim 4 above, and further in view of Kajiya et al., U.S. Patent No. 6,181,668. This rejection is respectfully traversed.

In addition to discussing the differences between the presently claimed invention and the cited art, the following comments particularly address comments presented in the Advisory Action, issued March 12, 2003, which are in response to the Request For Reconsideration filed February 27, 2003, and purportedly provide support for the outstanding rejections.

The Advisory Action presents several comments, purportedly elaborating on the previously presented rejection arguments, as well as in response a recently issued decision from the Federal Circuit Court of Appeals, In re Lee 61 USPQ2d 1430 (CA FC 2002).

Again it is noted that the Federal Circuit, in In re Lee, determined that a lower court's decision was wrong in supporting a conclusion of obviousness when made from common knowledge and common sense of an examiner without any specific hint or suggestion in a particular reference. In that case, the examiner had relied upon his own understanding of the art and argued that the claimed combinations would have been obvious, without supporting the same in the record with any particular objective reference.

Similarly, as pointed out previously, an Office Action rejection of a claim is required to establish a prima facie case of obviousness based upon the prior art." [An Examiner] can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references." In re Fritch, 23 USPQ 2d 1780, 1783 (Fed. Cir. 1992).

Thus, a prima facie obviousness rejection must both include motivation, with some support in the record other than the Examiner's common sense understanding of the art, and that motivation must lead one skilled in the art to make the purported modification or combination.

Again it is noted that In re Lee specifically pointed out that a conclusory rejection rationale is improper, i.e., merely stating that a combination would have been obvious, or an obvious modification, is improper.

The Advisory Action addressed several arguments presented in the previous response by elaborating why it would have been obvious to make the purported modification of Prior Art, in view of Maeda et al., including pointing out more specifically the required motivation for each modification.

a) First, the Advisory Action pointed out that the motivation in Prior Art to have two light sources was based on an alternative embodiment in Maeda et al. that used two light sources, and "the examiner concluded that the document taught equivalent light sources, and that selection of one from another [would] be an obvious modification."

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However, again this is merely a conclusory statement, and doesn't address the issue of why one skilled in the art would modify Prior Art to include two light sources.

As for reasoning why one skilled in the art would use this alternative embodiment of Maeda et al., the Advisory Action stated that "[s]ubstitution of alternative embodiments, especially for a duplication of an element (from one light source and con[v]erter) to two independent light sources each at their own wavelengths would be an increase in system reliability."

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Similarly, as pointed out in the previous response, it is improper rationale to base an obviousness rejection on a "mere duplication of elements." *Kimberly-Clark Corporation v. Johnson & Johnson and Personal Products Company*, 223 USPQ 603, 609 (CAFC 1984). ("The proper approach to the obviousness issue must start with the claimed invention as a whole. 35 U.S.C. § 103... It is true that it consists of a combination of old elements so arranged as to perform certain related functions. It is immaterial to the issue, however, that all of the elements were old in other contexts.")

Again, it is noted that this aforementioned precedent is binding in the present case ("an agency is not free to refuse to follow circuit precedent)." In re Lee 61 USPQ2d 1430, 1434 (CA

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FC 2002). Thus, the duplication of elements rationale is an improper basis for the outstanding rejections.

In addition, similar to above, the purported motivation of increasing "system reliability," by using two light sources rather than one, is not based on any support in the record except the Examiner's own belief. In addition, the argument doesn't even take into account that the invention of Maeda et al. is specifically directed toward the use of a single light source as being a preferred embodiment, and thus would actually teach away from using two light sources if used as support for modifying Prior Art.

Thus, regarding the item of two light sources addressed in the Advisory Action, the purported explanation of the underlying rejection has only been based on beliefs of the Examiner, and not on any objective support in the record. There is no support in the record that would indicate that Prior Art would need two light sources, or that the two light sources of Maeda et al. would solve any such need.

b) Similarly, the Advisory Action states: "[w]ith respect to the 'optimized with respect to the second laser' again, as acknowledged by the HOE used in Maeda et al., (variation of beam spot size) in order to focus upon the particular recording layer, the examiner **concluded** that because Maeda et al. does in fact use TWO recording layers (strata), separate beams being focused upon each layer, the HOE does in fact meet the above claimed language." (Emphasis added).

However, regardless of what holographic feature Maeda et al. may disclose, **there must be something in the record, other than the Examiner's belief, supporting a conclusion of obviousness.** This above rationale merely states that because Maeda et al. discloses a holographic element, it would have been obvious to include the same in Prior Art, without providing any objective support for such a modification.

**In addition, it would appear that the Examiner may misunderstand Maeda et al.**

The Advisory Action states that since Maeda et al. uses a holographic element to focus upon the particular recording layer of an optical disk, then Maeda et al. does in fact use two recording layers (strata), separate beams being focused upon each layer, and the holographic element of Maeda et al. would therefore disclose the presently claimed invention.

It would appear that the Advisory Action is referring to the claimed optical detector that is optimized with respect to the second laser beam.

However, Maeda et al. does not appear to disclose anything related to recording upon particular layers of an optical disk or using different recording layers, with separate beams being focused upon each layer. *free ✓*

Conversely, Maeda et al. merely illustrates adjusting a single light beam, of essentially two projected beams, to compensate for aberrations of an ultimate lens that is used to focus each beam upon a spot on the optical disk. Both beams of light would appear to radiate to the lens, and both beams of light would appear to radiate to the same spot on the optical disk. Thereafter, the reflected beams are not modified in any selective manner, but merely illuminate different portions of a detector. Since different portions of the detector are illuminated, the proper one of the portions can be chosen to represent the read data based on the corresponding type of disk present. *no*

It would not appear that Maeda et al. has anything to do with differing recording layers in an optical disk. Rather, Maeda et al. is directed toward producing two different light beams, such that two different types of optical disks could be used. *free*

Therefore, it would appear that in addition to the outstanding rejection rationale being improper, it would appear that the underlying premise for the rejection is incorrect.

c) In addition, the Advisory Action further states: "[w]ith respect to the converting element and function thereof, the examiner interpreted such as being present in the prior art as further noted in the specification on page 8, lines 4-8, what is generally known to those in this art."

However the corresponding portion of the present specification states:

"For the laser beam reflected from the signal layer of the optical disk 110 to be detected by the detector 119, it is generally known that the fracture surface aberration of the optical spot should be less than or equal to  $0.08\lambda$  ( $\lambda$  denotes wavelength), when the spot is formed on the signal layer of the optical disk 110 after being collected by the objective lens 116."

This portion of the specification merely states the known preferential fracture surface aberration of the optical spot for illumination on an optical disk.

The corresponding claimed feature is "an optical converter converting the first laser beam transmitted from the optical system into the laser beam detectable by the optical detector."

The abovementioned portion of the specification would appear to be related to how

objective lens 116 is supposed to be calibrated, whereas the claimed optical converter is after the claimed optical system, and has nothing to do with the objective lens 116 operation. As specifically claimed, the optical system, in independent claim 1, includes propagating light to and from the optical disk.

Thus the portions of the present specification cannot be relied upon in disclosing or suggesting the claimed optical converter, and consequently, Prior Art would not disclose the claimed optical converter.

d) The Advisory Action further states: "with respect to claims 3, 4 and 15, the examiner concluded that the second collimating lens is duplicative of the first collimating lens found in the acknowledged prior art. The examiner further concludes those familiar with reliability requirements (systems analysis) that independent signal paths increase the overall system reliability...as opposed to two independent signal path...i.e., failure of one collimating element does not mean total system failure. Since designing systems for increased reliability is part and parcel of the engineering environment, the **examiner concludes that the duplication of the collimating element is obvious for the increase of reliability.**" (Emphasis added).

This rationale is exactly opposite of the aforementioned present prima facie obviousness standards, as controlled by the Federal Circuit. As pointed out above, an obviousness rejection cannot be based on a "mere duplication of elements" rationale. In addition, the same rationale cannot be merely made proper by adding the Examiner's own person belief of what one skilled in the art would have understood or concluded.

Therefore, it is respectfully submitted that this rationale is similarly inadequate.

e) Lastly, the Advisory Action bases the rejection of claims 8-11 on being obvious "if for no other reasons than to use elements already available in the environment and hence save time in designing new elements yielding the same results - savings of time, cost, etc."

Again, this rationale fails to provide any objective support for the Examiner's own beliefs and conclusions. The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 23 USPQ 2d 1780, 1783-84 (Fed. Cir. 1992).

Therefore, it is respectfully submitted that in view of the above comments regarding the recently issued Advisory Action, and the previous remarks presented in previous responses, the outstanding rejections fail to meet a prima facie obviousness standard.

It is respectfully requested that the outstanding rejections be withdrawn and the pending claims be allowed. For at least the above, it is similarly submitted that new claim 20 is also in proper condition for allowance.

**CONCLUSION:**

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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Date: 5/5/03

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**MARKED UP AMENDMENTS**

Please **AMEND** the title to read as follows:

--OPTICAL PICKUP USING TWO LASER BEAM SOURCES OF DIFFERENT WAVELENGTHS FOR AN OPTICAL DISK DRIVE AND A CONVERTER TO OPTIMIZE A LIGHT BEAM REFLECTED OFF AN OPTICAL DISC FOR DETECTION BASED ON REFLECTED LIGHT BEAM WAVELENGTH --

Please **AMEND** the paragraph beginning on page 11, line 18, as follows:

--As described above, according to the present invention, the optical spots of laser beams of different wavelengths are adjusted to be substantially identical with each other in size utilizing the objective lens 116 and the holographic lens 117. FIGS. 3A and 3B illustrate the beam spot having been adjusted to be substantially identical, while FIG. 3C illustrates the first beam having a wider beam spot when holographic lens 117 is not used. Accordingly, a simple structure with fewer parts is realized in which the optical pickup 100 reproduces the information from two difference types of optical disks 110 and 110' using laser beams of different wavelengths. Further, since the structure of the optical pickup 100 is simple, and the number of parts is reduced, the manufacturing cost for the optical pickup and the optical disk drive employing the same is reduced.--